

CLAIMS

1. A system, comprising:

a first page and a second page in a memory, the first page containing data capable of being copied to the second page;

5 a table in the memory identifying the first page and the second page, the table capable of being enabled and disabled for access to the first page and the second page; and

a structure coupled to the table, the structure being capable of identifying data in the first page and the second page, wherein a device coupled to the memory is
10 capable of registering information in the structure before accessing the first page.

2. A system of claim 1, wherein the structure contains information identifying the device.

15 3. A system of claim 2, wherein the structure further includes a record to store the information information.

4. A system of claim 3, wherein the information is used to enable and disable access to the first page and the second page.

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5. A system of claim, 1 wherein the table and the structure references a physical address and a virtual address.

6. A system of claim 1, wherein the table is capable of storing the information.

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7. A system of claim 1, wherein the device is capable of transmitting requests for memory via direct memory access.

8. A system of claim 7, wherein information in the structure is a record of the request for memory access to the first page.

9. A structure in memory, comprising:
a table identifying a first page and a second page;
a mapping framework coupled to the table identifying the first page and the second page; and
a record in the mapping framework capable of storing information identifying a device before storing data in the first page and the second page.

10. A structure in memory of claim 9, wherein the first page and the second page each have a unique physical address.

11. A structure in memory of claim 10, wherein the table and the mapping framework is capable of referencing the unique physical address and a virtual address.

12. A structure in memory of claim 9, wherein the device uses direct memory access to access the first page and the second page.

13. A structure in memory of claim 9, wherein the record identifies the first page and the second page.

14. A structure in memory of claim 9, further including a physical address space in memory capable of storing the first page and the second page.

15. A method, comprising:

5 disabling access to a page in a memory;

 copying the page in the memory, wherein the page is identified by a structure coupled to a table in the memory, the structure being capable of storing information identifying a device; and

 enabling access to the page in the memory.

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16. A method of claim 15, further including:

 registering a first access to the page in the structure.

17. A method of claim 16, wherein registering the first access further includes

15 storing information transmitted by the device in a record in the structure.

18. A method of claim 15, wherein disabling access to the page in a memory

 further includes disabling one of application memory access, operating system memory access, and device memory access.

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19. A method of claim 15, wherein enabling access to the page further

 includes enabling one of application memory access, operating system memory access, and device memory access.

20. A method of claim 15, wherein copying the page includes updating a record in the structure.

21. A method of claim 15, wherein storing information identifying a device
5 further includes accessing one of a pre-relocation method and a post-relocation method.

22. A method of claim 15, wherein storing information identifying a device further includes permitting access via direct memory access.

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